

Science Instrument Services

Multimission Image Processing Laboratory

Capabilities Description

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for

Delivery 22.0

Prepared by L. Preheim
March 31, 1999

Change Log:

March 31, 1999 Updated short range schedule to reflect two week slip in due date for first software delivery

March 31, 1999 Reduced support for HPUX 10.20 to FEI clients only.

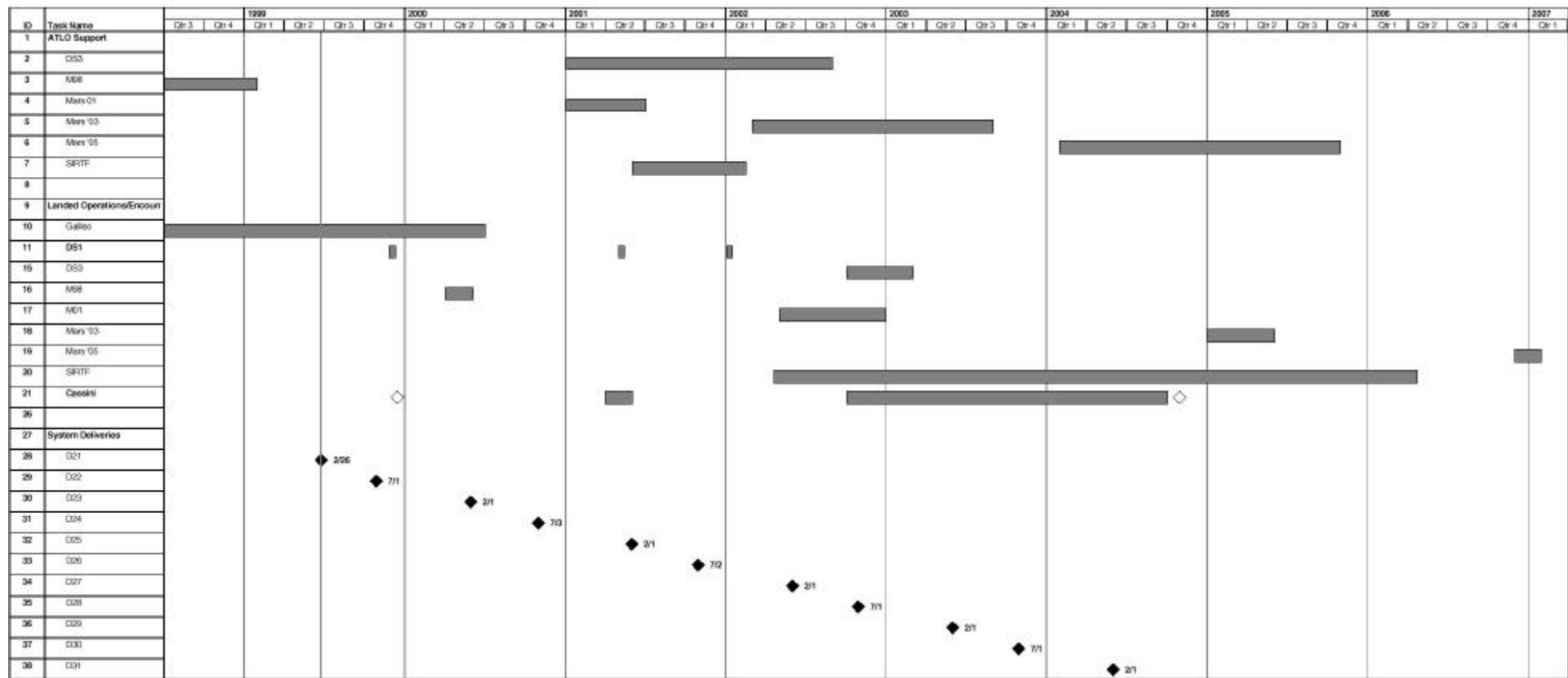
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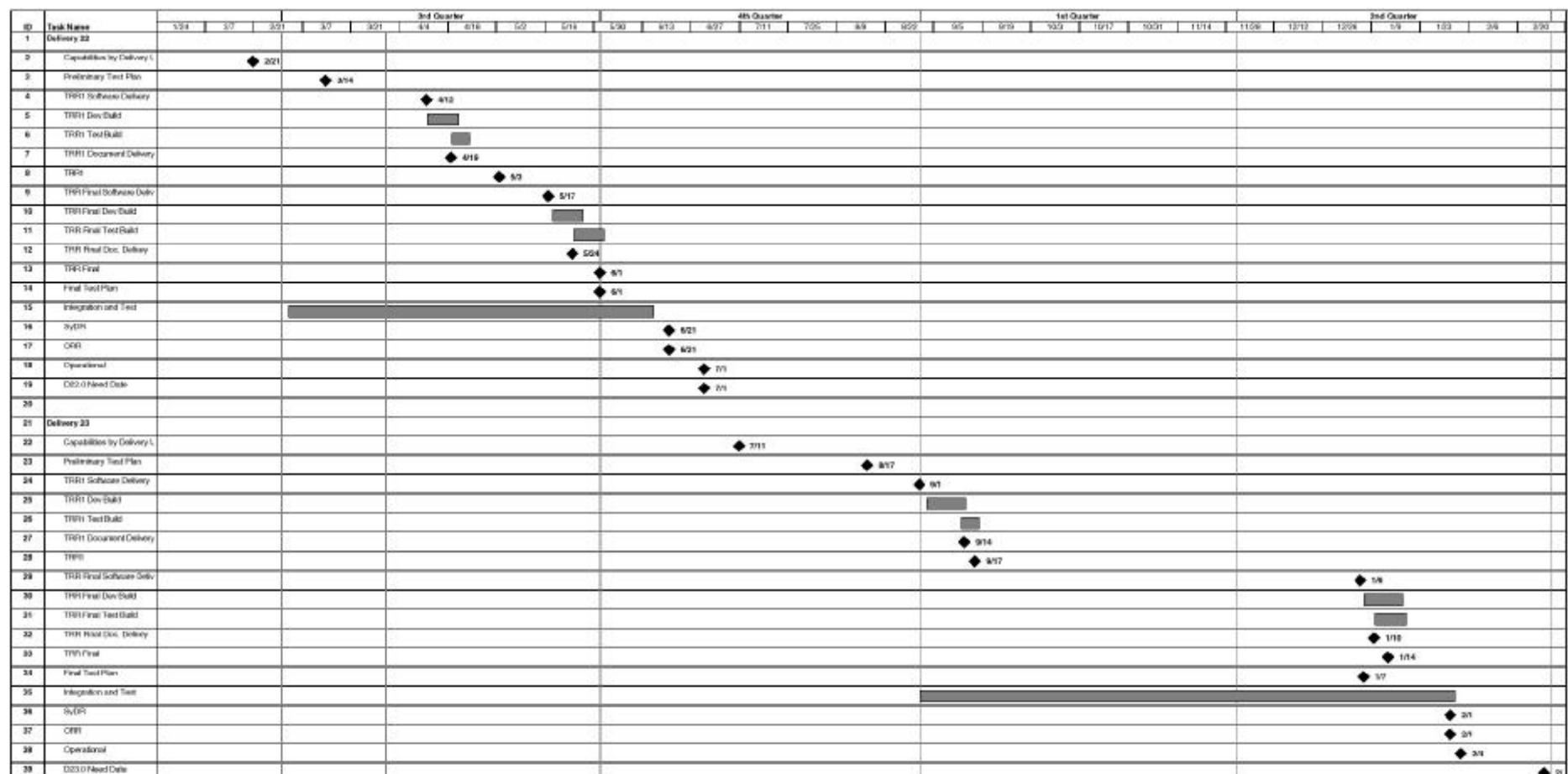
M IPL Capabilities Description

SIS Long Range Schedule



MIPL Capabilities Description

Short Term Schedule



M IPL Capabilities Description

D22.0

Operations PERIOD - July 1999 through February 2000

Project Support:

- Galileo Europa Mission
- Cassini Earth Encounter
- DS1 Operations
- Mars '98 Cruise and Operational Readiness Tests (ORTs)
- MVACS '98 Landed Operations
- Mars '01 Field Trials
- SIRTF Flight Data System Phase 5 (FDS5)

Newly Developed Capabilities:

General:

1. VICAR will be supported on:
 - a. Linux platforms (Red Hat - Intel and Alpha).
 - b. Solaris 2.6
 - c. IRX 6.5
 - d. HPUX 10.2 (FEI clients only)
 - e. Windows NT 4.0 (FEI clients only)
2. Runtime Library updates.
3. Mars mosaic programs (replacement for M'98 specific code)

M IPL Data Management System (MDMS):

FEI/clients ported to Linux.
File Type updates to support SIRTF.
Preliminary Catalog to support SIRTF.
Final Catalog to support MVACS Landed Operations.
File Type updates to support Mars '98.
File Type updates to support Cassini prototype.
Catalog updates based on lessons learned during Instrument Checkout.
Transition to Sybase version 11.9.
HTML documentation formal delivery.

XVD

Basic image label viewing tool

SAGE

Complete macro capability.
VICAR subcommands in parameter boxes.

MAGIC

Finish and deliver to CM the first phase (Toolbox, Parameter Box).

JADE

Deliver Java VICAR file I/O capability (RTL equivalent), and integration of this as a JAI data source.

System Build

Restructuring to support new TLM builds and new multimission objects and streamlined build process.

Cassini – Continued upgrades to infrastructure to support systematic processing, beginning support for telemetry processing, Beginning support for instrument planning and commanding.

DS1 -- Real-time Telemetry Support -- DS1 telemetry processing software is complete and provides support for a content independent downlink protocol. Minor bug fixes will be delivered. Changes to the processing stream to distribute calibrated and decompressed data will be delivered.

Galileo -- Real-time Telemetry Support -- Galileo continues as a fully functional set of telemetry processing software. Additional capabilities will be add to support automation and improve operability. NIMS systematic processing will be baselined and used as a point of departure for Cassini VIMS processing.

M98 -- Real-time Telemetry Support -- Mars 98 telemetry software will fully support EDR generation. Support for predict loading and final catalog schema will be added. Additional automation for generating mosaics will be delivered.

SIRTF – Real-time telemetry support for all three instruments and ancillary engineering data will be delivered. The software will include the capability to decompress data and interact with the catalog.

New development system-- Real-time Telemetry Support -- Telemetry processing has been redesigned to operate in a DCE cell. Current development is focusing on infrastructure. Logging, persistent store and basic support classes along with elements of control will be delivered. The initial delivery will support only rudimentary telemetry processing of one or two existing missions/data sets.

Anomaly Fixes

The following page provides a list of anomalies which should be fixed as part of the D22.0 development process.

Hardware Upgrades

We will replace Coda3 and Coda4 with a pair of current generation servers. One of the replaced servers will go to I&T to provide a multiprocessor testing capabilty. The fate of the other is undetermined at this time.

The standalone servers, Rushmore, Centinela, Mipl7, herschel, tehachapes and th “ixies” will be upgrade to be y2k compliant.

Office workstations will be upgrade to Ultra 5's as resources permit.

The DCE test cell will be upgrade to Solaris 2.6 with DCE 2.0.

Routers will be upgraded to be y2k compliant.

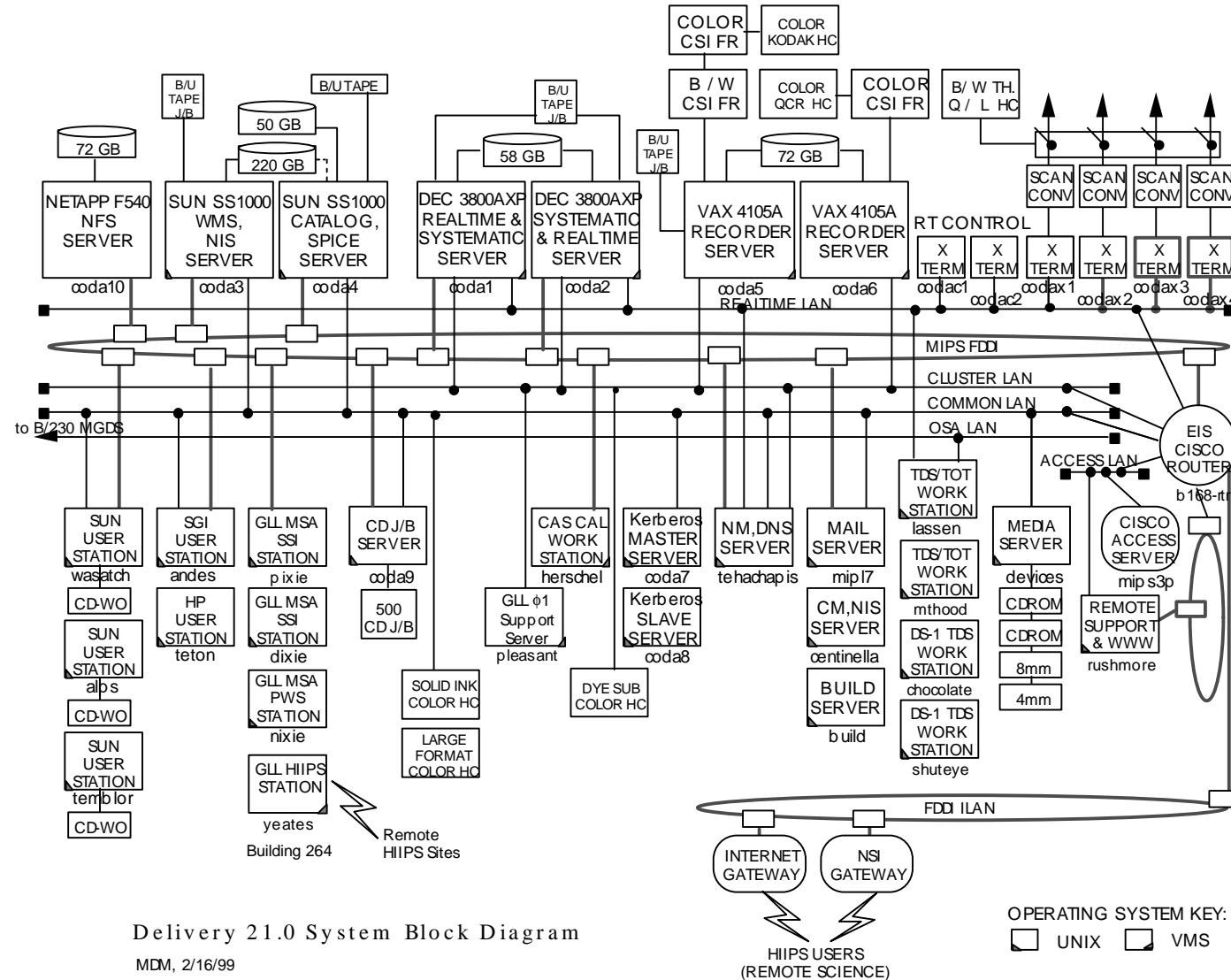
MIPL Capabilities Description

Anomaly Fixes

Rel #	No.	Component	S/S	Criti.	Description
	9029	SPICE	P2	2	SPICE displays an error message and tries to load local leapseconds, sclk and cmstarts files even when running in remote mode.
	9280	SAGE	gui	2	Alpha only – second sage does not initialize icon names to default
	9521	Mpf_util	mpf	3	No test cases
	9588	tgll_pws_bin_ph2	p2	2	Abends under SGI
	9045	Schema Changes	MDMS	2	Various schema changes needed
	9065	PWDADMIN	MDMS	2	The gui version of pwdadmin is unable to recognize the old password when trying to change the password.
	9365	dbView	MDMS	2	Sunos and IRX batch input format problems
	9587	giaconda	p2	3	No output under Solaris and sunOS
	9650	tracker3	p2	2	Crashes under VMS
	9683	sky	p2	2	Sky segVs
	100157	GLL various	P2	2	Argument incompatible warnings under Sun OS
	100158	Pathfinder various	P2	2	Argument incompatible warnings under Sun OS
	100203	Ds1Procs.sql	Sql	3	FileBlocks stored procedure crashes
	100458	FEI client timeout	MDMS	2	FEI clients can timeout if Kerberos host is busy.
	100499	dbView	MDMS	3	Feedback dots don't work
	100777	dbView	MDMS	3	Column missing precision and scale
	100778	PwdServer_2	MDMS	3	Binary characters in the log file
	100786	Fei3	MDMS	3	Long name problem under Windows NT
	100837	Fei3	MDMS	3	Filetypes table trigger error
	100838	Fei3	MDMS	3	DS1 FEI server core dumps after machine reboot
	100919	Fei3	MDMS	2	Client restart doesn't work after ticket expires
	100920	Fei3	MDMS	2	Some error messages go to the console only
	101140	Ssilinesync	P2	2	Ssilinesync failing for SSI BARC cutout windows.
	101215	xvd	Gui	3	Cancel doesn't recover from pseudo color
	101216	xvd	gui	3	Wrong window and button names
	101247	xvd	gui	3	Full screen does not work twice
	101407	SPARSE	p2	3	SPARSE fails on sgi
	101408	Cassini catalog	MDMS	3	Some columns do not update
	101411	astrtchar	p2	3	Astrtchar fails on sgi
	101422	PwdServer_2	MDMS	3	Password server crashes

M IPL Capabilities Description

Hardware:



Software Environment:

AXP

Platform	Vendor	Product	Version	Description	Used on:
AXP	DEC	OpenVMS	6.2 w/ y2k patches	Operating System	coda1, coda2
AXP	DEC	C	4.0	C compiler	coda1, coda2
AXP	DEC	C++	1.3A	C++ compiler	coda1, coda2
AXP	KL Group 1 user float	XRT graph-motif	2.4.0	XRT graph-motif	coda1
AXP	KL Group 1 user float	XRT 3d-motif	2.1.0	XRT 3d-motif D-float version	coda1
AXP	KL Group 1 user float	XRT table-motif	2.0.0	XRT table-motif	coda1
AXP	DEC	BKR	4.2	DEC book reader	coda1,coda2
AXP	DEC	FORTRAN	6.2	FORTRAN compiler	coda1, coda2
AXP	DEC	DECwindows	1.2-940307	X11+Motif for VMS	coda1, coda2
AXP	DEC	DTM	3.5-2	DEC Test Manager	coda1, coda2
AXP	Process Software	MultiNet	4.1A	TCP/IP for VMS	coda1, coda2
AXP	Ergonomic Solutions	Rampage	1.1	Paging software	coda1
AXP	Century Computing + GSFC	TAE	5.2	Transportable Application Environment	coda1,coda2
AXP	NCSA	Xmosaic	2.0	hypertext browser	coda1,coda2
AXP	Netscape	Netscape	requested, not installed due to other upgrades needed	web browser	
AXP	JPL	Math77	5.0	JPL Math library	coda1,coda2
AXP	University of Tenn, ORNL	pvm	3.37	parallel virtual machine system	coda1,coda2

M IPL Capabilities Description

VAX

Platform	Vendor	Product	Version	Description	Used On:
VAX	DEC	OpenVMS	6.2 w/ y2k patches	Operating System	coda5,coda6
VAX	DEC	C	5.7	C compiler	coda5,coda6
VAX	DEC	C++	5.6-013	C++ compiler	coda5,coda6
VAX	DEC	Fortran	6.5	Fortran compiler	coda5,coda6
VAX	DEC	DTM	3.5-2	DEC test manager	coda5,coda6
VAX	DEC	BKR	4.2	DEC book reader	coda5,coda6
VAX	Process Software	MultiNet	4.1A	TCP/IP for VMS	coda5,coda6
VAX	vendor + inhouse			Film recorder drivers	coda5,coda6

OPERATING SYSTEMS

Platform	Vendor	Product	Version	Description	Used on:
Sun	Sun	SunOS	4.1.3	Operating system	alps, mipl7, tremor
Sun	Sun	SunOS	4.1.4	Operating system	tehachapis
Sun	Sun	Solaris	2.6	Operating system	coda3,coda4,coda7,coda8 , charlotte, ssv-sol, maxwell, wasatch, office ws
Sun	Sun	Solaris	2.5.1	Operating system	centinela
Sun	Sun	Solaris	2.4	Operating system	devices, rushmore, coda9
Sun	Sun	Solaris	2.3	Operating system	breithorn, diablo, pixie, nixie, dixie
SGI	SGI	Irix	6.5	Operating system	andes
HP	HP	HPUX	10.20 w/ y2k patches	Operating system	teton

MIPL Capabilities Description

SUN

Platform	Vendor	Product	Version	Description	Used on:
NCD	NCD	NCDware	3.2	X-windows terminal software	MIPLx1... MIPLx6
Sun	Interactive Development Environment, Inc	IDE CLC++ CLCC CODECENTER OBJECTCENTER	n/a	Development tool	mpl7 - LICENCE SERVER arsia - Software
Sun	KL Group	XRT graph-motif	2.4.0	XRT graph-motif	mpl7
Sun	KL Group	XRT 3d-motif	2.1.0	XRT 3d-motif	mpl7
Sun	KL Group	XRT table-motif	2.0.0	XRT table-motif	mpl7
Sun	KL Group	XRT graph-motif	2.4.0	XRT graph-motif	coda3
Sun	KL Group	XRT 3d-motif	2.1.0	XRT 3d-motif	coda3
Sun	KL Group	XRT table-motif	2.0.0	XRT table-motif	coda3
Sun	MIT	X11R5	R5	Windowing system	all but alps, temblor
Sun	VITec	X11R5	R5	Windowing system	alps, tremblor
Sun	Sun	Openwindows	3.6	Windowing system	Solr 2.6 sys
Sun	Pure Software 3 licenses	Purify	4.1	Development tool	coda3
Sun	University of Maryland	Amanda	2.2.6	Network backup tool (Advanced Maryland Automatic Disk Archiver)	breithorn, non-autoclient workstations
Sun	Spectra-Logic	Alexandria	3.8 Patch 1	Backup tool for WMS	coda3
Sun	Veritas	Volume Mgr	2.51	On-line storage management software	coda3, coda4

MIPL Capabilities Description

Platform	Vendor	Product	Version	Description	Used on:
Sun	Veritas	File System	3.21	File System	coda3, coda4
Sun	Cisco	SBUS Adapter Driver	2.1, 3.1, 3.2 4.1	FDDI Card driver	alps, wasatch, tremblor, mipl7, coda3, coda4
Sun	NCSA	httpd		WWW document server	tehachapis
Sun	Mercury Interactive	xrunner	4.0.1	X based regression testing	mipl7 (can run on other non-VITEC Suns)
Sun	Sybase	Sybase Open Client	11.x	Client	all
Sun	Sybase	Sybase server	11.5		
Sun	Century Computing + GSFC	TAE	5.2	Transportable Application Environment	all
Sun	Boston Business Systems	edt+	7.17	EDT text editor for UNIX	all
Sun	Research Systems Inc. 1 user	IDL	4.0.1	Data Processing Tool	all
Sun	GNU project	perl	5.005.02 5.001	scripting language	all
Sun	Research Systems, Inc 1 user	ENVI	2.0	Data processing tool	all
Sun	Curtin University	netman	1.1	network monitoring tool	tehachapis
Sun	Curtin University	interman	1.1	network monitoring tool	tehachapis
Sun	Curtin University	etherman	1.1a	network monitoring tool	tehachapis
Sun	Curtin University	packetman	1.1	network monitoring tool	tehachapis
Sun	MIT	xautolock		automatic screenlock	all Suns except coda3 and coda4

MIPL Capabilities Description

Platform	Vendor	Product	Version	Description	Used on:
Sun	Northeastern University	req	2.7	request management system	Mipl7
Sun	Northeastern University	tkreq		request management system	Mipl7
Sun	Northeastern University	td		request management system	Mipl7
Sun	Northeastern University	tk	3.6	request management system	Mipl7
Sun	UC Berkeley	tcl	7.3	needed for CDE scripting	
Sun	public domain	Xarchie		internet browser	all
Sun	Univ Minnesota	Xgopher		internet document transfer	all
Sun	Northwestern Univ	top	3.4 3.5beta8 - (Solaris 2.6)	cpu monitor tool	all
Sun	USC	sysinfo	3.4 2.1.2	system hw tool	Solaris 2.6 sys SunOS sys
Sun	OSF	Motif		Windowing environment	all except - coda3, coda4.
Sun	Colorado State	sudo	1.31pl4 (Solaris) 1.53 (SunOS)	Superuser environment wrapper	all
Sun	Cornell University	tcsh	6.06	Default shell	all
Sun	GNU project	emacs	19.31, 19.34	extensible window editor	all
Sun	NCSA	Xmosaic	2.6, 2.7Beta4	hypertext browser	all
Sun	RogueWave	tool.h++	7.0.1	C++ development library	all
Sun	MIT	kerberos	4, 5	secure client server data transfer	all
Sun	University of Delaware	xntpd	3.3c (Sun) 1.2, 2.2.1 (HP)	Network Time Protocol (ntp) daemon	all
Sun	Cornell University	gated	3.5.8	Network routing daemon	Coda3,coda4, Hosts with 2 network interfaces
Sun	JPL	Math77	5.0	JPL Math library	all

MIPL Capabilities Description

Platform	Vendor	Product	Version	Description	Used on:
Sun	University of Tenn, ORNL	pvm	3.37	parallel virtual machine system	all
Sun	Sun	C	3.0.1	Compiler	all
Sun	Sun	C++	4.0.1	Compiler	all
Sun		Fortran 77	3.01	Compiler	all
Sun		pine	3.95	mail tool	
Sun		elm	2.4 pl 24 pgp2	mail tool	
Sun		exmh	1.5.3	mail tool	
Sun	TransArc	DCE	2.0		pappasmurf, smurfette, smurfman, mentha, spacemouse, porgy
Sun	Orbix	CORBA	2.2 MT		spacemouse
		POSIX		standard	spacemouse
Sun	Sun	CDE		desktop environment	Solaris systems
Sun	Netscape	Netscape	4.08 & lower	web browser	all
Sun		Java Dev Kit	1.02, 1.1.4 user specific /pkg/java	development kit	
Sun	Platnum	CCC/manager	3.1.1.2	CM tool	alps
Sun	Platnum	CCC/Harvest	3.01	CM tool	centinela server, client all
Sun	public domain	xpm	3.4F	X pixmap library	used with sage
Sun	USGS	ISIS	970214	Image processing system	Solaris systems
Sun	Candela	color management software	CL511, CL514	color management software	alps
Sun		mvp	3.0 (/usr/local/vicar/external)	Multimission VICAR Planner, AI planner	

MIPL Capabilities Description

Platform	Vendor	Product	Version	Description	Used on:
Sun		spice	Current MIPS delivery version	NAIF toolkit for GLL	
Sun		simbad			
Sun		pds_label_lib	4.0	planetary data system label library for read/write/process PDS labels	
Sun		pds_lablib3	1.0	PDS Label Library Light	
Sun		aesop	2.2	Extensible Motif-based on board-algorithm evaluation system	
Sun		DD++	1.2	C++ wrapper for the Motif 1.2 drag and drop preregister protocol.	
Sun		MotifApp	1.9 & below	Doug Young's C++/Motif user interface class, modified by MIPS.	

MIPL Capabilities Description

SGI

Platform	Vendor	Product	Version	Description	Used On:
SGI	SGI	Irix	6.5	Operating system	andes
SGI	Century Computing + GSFC	TAE	5.2	Transportable Application Environment	all
SGI	Research Systems Inc. 1 user	IDL	4.0.1	Data Processing Tool	all
SGI	GNU project	perl	5.004.04 5.005.02	scripting language	
SGI	Research Systems, Inc 1 user	ENVI	2.0	Data processing tool	
SGI	OSF	Motif		Windowing environment	
SGI	Colorado State	sudo	1.31pl4 (Solaris) 1.53 (SunOS)	Superuser environment wrapper	
SGI	Cornell University	tcsh	6.06	Default shell	
SGI	GNU project	emacs	19.31, 19.34	extensible window editor	
SGI	NCSA	Xmosaic	2.6, 2.7Beta4	hypertext browser	
SGI	RogueWave	tool.h++	7.0.1	C++ development library	
SGI	MIT	kerberos	4	secure client server data transfer	
SGI	University of Delaware	xntpd	3.3c (Sun) 1.2, 2.2.1 (HP)	Network Time Protocol (ntp) daemon	
SGI	University of Tenn, ORNL	pvm	3.37	parallel virtual machine system	
SGI	public domain	xpm	3.4F	X pixmap library	used with sage
SGI		mvp	3.0 (/usr/local/vicar/external)	Multimission VICAR Planner, AI planner	

MIPL Capabilities Description

Platform	Vendor	Product	Version	Description	Used On:
SGI		spice	Current MIPS delivery version	NAIF toolkit for GLL	
SGI		simbad			
SGI		pds_label_lib	4.0	planetary data system label library for read/write/process PDS labels	
SGI		pds_lablib3	1.0	PDS Label Library Light	
SGI		aesop	2.2	Extensible Motif-based on board-algorithm evaluation system	
SGI		DD++	1.2	C++ wrapper for the Motif 1.2 drag and drop preregister protocol.	
SGI		MotifApp	1.9 & below	Doug Young's C++/Motif user interface class, modified by MIPS.	

MIPL Capabilities Description

HP

Platform	Vendor	Product	Version	Description	Used on:
HP	Century Computing + GSFC	TAE	5.2	Transportable Application Environment	
HP	GNU project	perl	5.003, 5.004 depends on what dir	scripting language	
HP	Cornell University	tcsh	6.06	Default shell	
HP	University of Delaware	xntpd	1.2, 2.2.1	Network Time Protocol (ntp) daemon	
HP	UC Berkeley	tcl	7.3	needed for CDE scripting	
HP	HP	CDE	Bundled with system	common desktop environment	
HP		mvp	3.0 (/usr/local/vicar/external)	Multimission VICAR Planner, AI planner	
HP		spice	Current MIPS delivery version	NAIF toolkit for GLL	
HP		simbad			
HP		pds_label_lib	4.0	planetary data system label library for read/write/process PDS labels	
HP		pds_lablib3	1.0	PDS Label Library Light	
HP		aesop	2.2	Extensible Motif-based on board-algorithm evaluation system	
HP		DD++	1.2	C++ wrapper for the Motif 1.2 drag and drop preregister protocol.	

M IPL Capabilities Description

Platform	Vendor	Product	Version	Description	Used on:
HP		MotifApp	1.9 & below	Doug Young's C++/Motif user interface class, modified by MIPS.	

D23.0

Operations PERIOD - February 2000 through July 2000

Project Support:

- Galileo Europa Mission
- Cassini Instrument Checkout 2
- DS1 Operations
- Mars '01 ATLO
- MVACS '98 Landed Operations
- Mars '98 systematic processing
- SIRTF Flight Data System Phase 6 (FDS6)

Newly Developed Capabilities:

General:

VICAR will be supported on:

1. Linux platforms (Red Hat - Intel and Alpha).
2. Solaris 2.6
3. Solaris 2.7
4. IRX 6.5
5. Windows NT 4.0 (FEI clients only)

MIPL Data Management System (MDMS):

FEI/clients ported to Solaris 2.7

File Type updates to support SIRTF.

File Type updates to support Mars '98.

File Type updates to support Cassini uplink prototype.

Catalog updates based on lessons learned during Cassini Earth Encounter.

SAGE

MAGIC

System Build

Fully product-“ized” system build procedures.

Cassini

Continued upgrades to infrastructure to support systematic processing, full support for telemetry processing, preliminary support for instrument planning and commanding.

DS1

Real-time Telemetry Support -- DS1 telemetry processing software is complete and provides support for a content independent downlink protocol. Minor bug fixes will be delivered.

Galileo

Real-time Telemetry Support -- Galileo continues as a fully functional set of telemetry processing software.

M98

Real-time Telemetry Support -- Mars 98 telemetry software will fully support EDR generation. Additional automation for generating mosaics will be delivered. Educational outreach support will be delivered.

SIRTF

The software will include the capability to operate lights out, fill gaps and provide preliminary processing history in the catalog.

Anomaly Fixes

No.	Component	S/S	Critical ity.	Description

Hardware

Software Development and Operations Environment

D24.0

Operations PERIOD - July 2000 through February 2001

Project Support:

- Galileo Europa Mission
- Cassini Jupiter Encounter
- Mars '01 ATLO and cruise
- DS1 Encounter.
- SIRTF ATLO

Newly Developed Capabilities:

General:

M IPL Data Management System (MDMS):

SAGE

MAGIC

System Build

Cassini

DS1

Galileo

Mars '01

SIRTF

Anomaly Fixes

Hardware Upgrades

Anomaly Fixes

No.	Component	S/S	Critical ity.	Description

MIPL Capabilities Description

Hardware

Software Development and Operations Environment

D25.0

Operations PERIOD - February 2001 through July 2001

Project Support:

- Galileo Europa Mission
- Cassini Post-launch Calibration completion
- Cassini Cruise Operations
- DS1
- SIRTF ATLO
- Stardust
- Mars '98 Landed Support
- Mars '01 and Rocky Field Trials

Newly Developed Capabilities:

General:

Anomaly Fixes

No.	Component	S/S	Critical ity.	Description

Hardware:

Software Development and Operations Environment